DOCUMENT RESUME

ED 103 422 SP 009 029

AUTHOR	Bjerstedt, Ake, Ed.
TITLE	Didakometry; Teacher-Oriented Research: Some Current Projects at the Malmo School of Education. No. 46.
INSTITUTION	School of Education, Malmo (Sweden). Dept. of Educational and Psychological Research.
PUB DATE	Dec 74
NOTE	36p.
AVAILABLE FROM	Department of Educational and Psychological Research, Malmo School of Education, Att.: Mrs. Barbro Bergstrom, Fack, S-200 45 Malmo 23, Sweden (No price quoted)
EDRS PRICE	MF-$0.76 HC-$1.95 PLUS POSTAGE
DESCRIPTORS	*Closed Circuit Television; *Educational Research; Job Training; Occupational Information; School Personnel; *Teacher Education; Teacher Role
IDENTIFIERS	Sweden

ABSTRACT

This document is a report on teacher oriented research at the Department of Educational and Psychological Research of the Malmo School of Education in Sweden. It contains four papers: "Education in Teacher Training," "Studies of Closed Circuit Television," "Job Analysis as a Basis for Training and Further Education in the School Sector," and "Job Training in the Educational Sector." (DDO)

ED103422

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

BEST COPY AVAILABLE

TEACHER-ORIENTED RESEARCH: SOME CURRENT PROJECTS AT THE MALMÖ SCHOOL OF EDUCATION

Åke Bjerstedt (Ed.)

Bjerstedt, Å. (Ed.) Teacher-oriented research: Some current projects at the Malmö School of Education. Didakometry (Malmö, Sweden: School of Education), No. 46, 1974.

The research being carried out at the Department of Educational and Psychological Research at the Malmö School of Education may be sub-divided into four major sections: (1) subject-matter oriented, (2) teacher-oriented, (3) student-oriented, and (4) environment-oriented research. Each section consists of a group of independent projects with some similarities in research area and approach. In the present survey report some major research projects of the second of these sections are presented. For those who want more information, notes on contact persons and references are enclosed.

Keywords: Educational research, Sweden; CCTV in teacher training; education in teacher training; job analysis as a basis for job training.

CONTENTS

Preface	3
Education in teacher training	4
Studies of closed-circuit television	14
Job analysis as a basis for training and further education in the school sector	22
Job training in the educational sector	27

PREFACE

For some years the research carried out at the Department of Educational and Psychological Research at the Malmö School of Education has been informally sub-divided into four major sections: (1) subject-matter oriented research, (2) teacher-oriented and personnel-oriented research, (3) student-oriented research, and (4) environment-oriented research. Each section consists of a group of independent projects with some similarities in research area and methodological approach.

In order to inform about these activities we have prepared five survey reports:

(1) A brief general overview:

Department of Educational and Psychological Research, Malmö: Some notes on current activities. Pedagogisk dokumentation, No. 22, 1973.

(2) Area report on the first section:

Subject-matter oriented research: Some current projects at the Malmö School of Education. Didakometry, No. 39, 1973.

(3) Area report on the second section:

Teacher-oriented research: Some current projects at the Malmö School of Education. Didakometry, No. 46, 1974.

(4) Area report on the third section:

Student-oriented research: Some current projects at the Malmö School of Education. Educational and Psychological Interactions, No. 45, 1973.

(5) Area report on the fourth section:

Environment-oriented and organization-oriented research: Some current projects at the Malmö School of Education. Educational and Psychological Interactions, No. 50, 1974.

Thus, in the present report some major research projects currently underway in the second of the sub-sections mentioned are presented.

For those who want more information, notes on contact persons and references are enclosed.

A. B.

BEST COPY AVAILABLE

EDUCATION IN TEACHER TRAINING (PIL)

Contact: Bertil Gran

1. Background and aims

The role of the teacher is constantly changing. New tasks come to be included in the profession, and the emphasis placed on different tasks also changes. The principal aims of this project are to explore the role of the teacher today and in the near future and also to analyze the extent to which teacher training matches these requirements. In this way it is hoped to provide a foundation on which to plan the training of class and subject teachers:

- in curricular development
- in connection with measures at local planning level
- in the course of work done by teachers and students themselves.

The emphasis is on the role of Pedagogics.

The project has the following subsidiary objectives:

(1) Occupational analyses and analyses of training needs

The aim here is to plot the requirements and expectations confronting the teacher today and those which can be expected to apply in the near future. The occupational analysis proceeds from two angles. One of these is: what demands and expectations are made on the teacher from different quarters? The other is: what are the main difficulties confronting the teacher in the actual work situation? These results will be compared with the content and design of present-day teacher education.

(2) Teaching material development

One of the tasks of the project is to list and analyze existing teaching materials and their potential uses in teacher education, especially Pedagogics and General Teaching Methods. The project will entail independent material development in certain sectors.

(3) Experimental activities

Experimental activities are being conducted in collaboration with various schools of education. These are concerned with partly new forms of activity in teacher education, mostly in Pedagogics but also in matters concerning collaboration between different subjects.

(4) Special studies

Several special studies have been carried out in connection with the project. One of these has concerned the in-service training requirements of junior level teachers, while another has concerned the effects of the obligatory term of teaching practice.

2. Occupational analyses and analyses of training needs

In the course of the project, comprehensive information has been collected on the ways in which different groups formulate the demands they make on the teacher and also on the difficulties encountered by the teacher in the situation concerned. The methods used are: a) analysis of official texts, b) interview studies, c) critical incident studies, d) questionnaires, e) systematic observations. Some examples will be given of the ways in which the problems have been tackled and of the results obtained.

2.1 Text analyses

The more official expectations entertained by society can be assumed to have been expressed in curricula, statutes, instructions and reports by Parliamentary Commissions. An analysis of official texts of these kinds (Löfqvist, 1969) reveals a very broad spectrum of demands and expectations, with variations of emphasis between different texts. Among other things one finds that

- the most common demands both in syllabi and curricula and in instructions concern the actual planning and conduct of teaching. There is also unanimity concerning the need for collaboration
- demands concerning the teacher's attitudes and general behavioral patterns are particularly emphasized in texts referring to teacher education
- it is very rare for particular personality characteristics to be required of the teacher. Out of a total of more than 1.000 formulations, only 6 concern requirements in the way of personal qualities
- turning to the more specific formulations of demands, one finds that the highest frequencies are concerned with getting to know one's pupils, collaborating with one's fellow teachers and co-operating with the pupils' parents and guardians.

A special study was made of changes between the 1962 comprehensive school curriculum (Lgr 62) and the 1969 version (Lgr 69) in Sweden (Löfqvist, 1971a). It transpired that Lgr 69 includes more (and in some cases special) demands to the effect that the teacher must observe objectivity,

particularly in the selection and study of subject matter, that he must co-operate with the pupils, the school stoff, parents and quardians, that he must individualize his teaching, deal with non-disciplinary subject matter such as sexual and interpersonal questions, the protection of the environment and international affairs, make an allround assessment of the pupil and assume responsibility for the pupil's cognitive, manual, emotional, æsthetic, physical and social development.

2.2 Interview studies

Interview studies have been made of various "contact" groups and of teachers from different levels in order to ascertain the expectations which these different groups make on the teachers (Mårtensson, 1973). The 70 persons interviewed were selected by a statistical random process. Altogether some 3.400 demands on the teacher were mentioned in these interviews.

There is a high degree of unanimity between the different groups interviewed, especially between the three groups of teachers. The pupils deviate most from the total picture. For instance, it is worth noting how often the pupils mention demands concerning the general attitude of their teachers, above all the demands that they should be democratic, receptive to criticism, helpful and positive.

2.3 Critical incident studies

Two studies have been carried out, one designed to plot the problem situations confronting subject trainee teachers during their term of teaching practice, and another on the same subject with reference to prospective class teachers. Only the first of these studies has been reported (Löfqvist, 1971b). Approximately 200 subject teachers contributed about 1.600 events. If we consider the type of situation confronting the subject teachers, we find among other things that

- pupil welfare problems, including disciplinary matters, predominate and constitute almost 1/3 of all situations
- there is a difference between the senior level of comprehensive school and upper secondary school: pupil welfare situations predominate at senior level, whereas planning and evaluation situations predominate in upper secondary school
- there are no differences between teachers of different subjects, except in the case of language teachers, who report more situations of an evaluative character.

BEST COPY AVAILABLE

The survey also included an analysis of the decision making process and pattern of action whereby the teacher had tried to solve the problem situations that had arisen. The following general features could be noted, among others:

- Much the same decision making process applies to teachers at different levels and with different subject combinations
- As a rule the teacher takes his own decisions and acts independently without consulting anybody else
- Where "pupil welfare" is concerned, guidance is considered to have more positive results than criticism and correction.

2.4 Evaluative questionnaires

A questionnaire with variables which could be regarded as demands on the teacher was constructed on the basis of the previous substudies (Fritzell, 1972). The questionnaire was in three parts. One part concerned more general formulations, most of them derived from official documents. The second part was made up of more concrete formulations, most of them derived from the interview studies. The third part comprised relatively detailed situations taken from the critical incident material.

Each part of the questionnaire contained several different evaluatio. aspects, including the importance of the demand now (aspect 1) and the degree to which teacher education matches up to these demands (aspect 2). The questionnaire was completed by 750 randomly selected headmasters, directors of studies, in-service training directors and consultants at county school boards and lecturers in Pedagogics, School Level and Subject Methods at schools of education.

A structural analysis of the more general descriptions of the teacher's tasks, using a factor analysis method, shows (Fritzell, 1973) that it is possible to extract five interpretable factors. These different factors can be regarded as the teacher's occupational functions. Verbally they can be described as follows:

(1) Cognitive factor, concerning the measures taken by the teacher in order to communicate knowledge and skills. This presupposes subject knowledge and general knowledge on the teacher's part, as well as language skills and a scientifically critical and objective attitude.

(2) Socio-emotional factor, concerning the measures taken by the teacher with a view to the pupils' social and emotional development. This factor concerns such things as knowledge of one's pupils, collaboration with and understanding of the pupils, a positive attitude towards them and to the goals of the school system in these respects. But it also includes tasks of special pupil welfare in connection with help to pupils with adjustment difficulties.

(3) Method-material factor, concerning the teaching measures taken by the teacher with particular reference to methods and materials, e.g. skills in the use of teaching materials and to take measures concerning teaching technique.

(4) Co-operation factor, concerning measures in communicating with other groups than pupils e.g. fellow teachers, headmasters, different pupil welfare specialists, the pupils' parents and guardians and so on.

(5) Development factor, concerning the measures taken by the teacher with a view to his own development and that of the school, e.g. participation in in-service training concerning teaching methods and subject knowledge, participation in material development and other aspects of school development and contact with educational research and debate.

The factor structure thus obtained is assumed to cover all the tasks of the teacher today. It is stable with regard to different levels of the comprehensive school and different contact groups evaluating the tasks of the teacher.

The most important of these five variables, both in the present situation and in a future perspective, is thought to be the function dealing with the tasks of the teacher in connection with the social-emotional development of the pupils (Fritzell, 1974a). Teacher education is thought primarily to cater for the functions concerning cognitive pupil development and questions of methods and materials. It is considered least adequate with regard to the function of co-operation. The function dealing with aspects of development is considered to be relatively unimportant but comparatively well provided for in teacher education.

In factor analyses of the more concretely described tasks (Fritzell, 1974b), one finds structures that can be described in terms of

- pupil development
- objectives
- involvement
- method
- disturbances
- differentiation
- evaluation
- motivation

The following observations provide a brief summary of the main tendencies in the survey material under consideration. Great emphasis is invariably placed on those aspects of the teacher's work which can be directly related to pupil development. Particular importance is attached to efforts aimed at individualizing the teaching process and concentrating on the difficulties of individual pupils with regard to motivation, activity etc. Less importance is attached to tasks which can be said to be outside the traditional role of the teacher. These tasks may concern participation in the social debate and development work inside the school or involvement in the pupils' interests apart from teacher-controlled activities.

Concerning attitudes towards present-day teacher training, the tendency is for methodological aspects directly influencing the ability of the teacher to lead the individual lesson to be well provided for. Teacher training is considered less satisfactory when it comes to analyzing the background to the social or emotional problems of individual pupils or tackling difficulties of a more disciplinary nature. Teacher training is also considered insufficient with regard to the achievement or improvement of collaboration between teachers and the pupils' parents.

2.5 The transformation of the role of the teacher

Development work in the school sector during the past few years can be expected to have transformed the tasks of the teacher as well. A number of development projects from the Malmö region have therefore been selected for analysis (Rodhe & Gran, 1973). Among other things, this development work has had the following characteristic features:

- more pupil-centred teaching through the greater use of individual learning programs and through the construction of new teaching materials and the planning of teaching materials in a more rational way
- an emphasis of the total personal development of the pupil and efforts to promote social and democratic training by means of better opportunities for pupils to play an active part in work, more contacts between school and society at large, the engagement of non-teacher personnel and the development of a more stimulating physical and social school environment
- efforts to provide continuity of pupil development by means of collaboration between different school levels and work with more non-graded groupings
- special consideration towards pupils with handicaps or special needs, through efforts to integrate handicapped pupils with the ordinary social environment, through special action programs and the construction of special teaching aids for remedial teaching
- active pupil involvement in the planning of school work through the development of democratic working routines in school
- problem-oriented teaching through collaboration between different subjects in projects and spheres of interest.

As the functions of school have become more and more complex, different types of personnel have been engaged to help the teacher and take over certain tasks. This has led to a process of differentiation, with certain types of task being taken over by a certain type of specialist. The introduction of new personnel categories is not the only differentiation pro-

 BEST COPY AVAILABLE

cess. Tasks have also been divided up between the teachers.

The differentiation process is parallelled by an integration process. The individual teacher or team of teachers must be responsible for a co-ordination and integration of the work of the different people involved. This gives the individual teacher a very wide area of contacts.

The change concerns not only what the teacher does but how he does it. This is above all true of the decision making process and the assumption of responsibility. Whereas formerly the teacher himself took practically all decisions and himself took action accordingly, one finds in the experimental activities a tendency for decisions to be arrived at together with other people and for other people besides the teacher to put those decisions into practice. The tasks of responsibility also entail shared responsibility for a larger group of pupils. The teacher also relinquishes some of his responsibility to the pupils themselves.

2.6 Analyses of the training needs of junior level teachers

In the surveys by Fritzell to which reference has already been made, a number of assessments were made of training needs. A special survey has also been carried out of training needs among junior level teachers (Heiling et al., 1972).

In this survey an attempt has been made to ascertain whether training needs vary according to the experience of the teacher concerned and the place where he works. The regional factor does not exert any decisive influence on the perceived need for in-service training, but the differences that do exist show that a certain portion of training needs to be differentiated with regard to regional requirements. On the other hand the number of years' teaching service (measured from the year of graduation) has a relatively important effect on individual experience of the need for further training. Thus the need for further knowledge concerning pupils with behavioral problems, physical and social handicaps and concerning the working climate in school will diminish as the teacher grows older. Younger teachers on the other hand experience a greater need of training on pre-school matters, at the same time as they feel less in need of training on the subject of planning and evaluation.

3. Teaching material development

Two major inventories have been made of teaching materials which can be used in teacher education, one of them concerning printed material (Johansson, 1972) and the other concerning films (Johansson, 1973). The latter inventory has been supplemented by an expert assessment of the

usefulness of the films in different lines of teacher training.

4. Experimental activities

These activities have been described in a preliminary summary (Heiling, 1973). One of the experimentation areas - group dynamics and role play - has been documented separately (Wiechel, 1970 and 1973). Material has been compiled for decision training and evaluation in teacher training. A report is in preparation concerning team teaching (Holmkvist, Löfqvist et al., 1974).

5. The importance of the teaching practice term

Attitude and personality changes in approximately 100 trainee teachers during their period of training have been studied in a special survey (Angel, 1974).

If we consider developments from admission up to and including the teaching practice term, the trainees tend on the whole to become less ego-defensive, i.e. less prone to defend themselves in frustrating situations: they solve situations in a more constructive way, experience less menace to their authority from the pupils, and tend to speak more in favour of human rights and more in opposition to authority. They also become more independent, more "curative" in their attitudes and more loyal to their friends.

If on the other hand we confine ourselves to the effect of the teaching practice term, we find that in many respects development tends to move in the opposite direction. The trainees develop a greater need for aggression, they become less tolerant in disciplinary situations, they are less prepared to accept others as leaders, and they develop a domineering tendency. They become more aggressive in the school context ("give it to them hot - no mollycoddling").

Experiences during the teaching practice term are highly coloured by the various conditions in which the trainees have to work. More than 1/3 of them are dissatisfied with their supervisors because they furnish too little "criticism", do not listen often anough, are too domineering and do not provide guidance and help.

References

Angel, B. Praktikterminen i lågstadielärarutbildningen: En undersökning av personlighets- och attitydförändringar under utbildningstiden. /The teaching practice term in the training of junior level teachers: A survey of personality and attitude changes during the training period./ Pedagogisk-psykologiska problem, No. 257, 1974.

Fritzell, C. Enkätkonstruktion: Ett empiriskt exempel avseende analys av lärarbefattningen. /Questionnaire construction: An empirical example concerning the analysis of the teacher's occupation./ Testkonstruktion och testdata, No. 15, 1972.

Fritzell, C. Lärarens befattningsfunktioner: En struktur baserad på faktoranalys av enkätmaterial. /The teacher's occupational functions: A structure based on factor analysis of questionnaire material./ Pedagogisk-psykologiska problem, No. 213, 1973.

Fritzell, C. Lärarens befattningsfunktioner: Nivåanalys av skolledares och lärarutbildares värderingar. /The teacher's occupational functions: Analysis of evaluations by school-leaders and teacher-trainers./ Pedagogisk-psykologiska problem, No. 229, 1974. (a)

Fritzell, C. Lärarens befattningsfunktioner: Värderingar av intervju- och critical-incidentmaterial. /The teacher's occupational functions: Evaluations of interview and critical incident material./ Pedagogisk-psykologiska problem, No. 256, 1974. (b)

Heiling, G. et al. Lågstadielärares fortbildningsbehov i pedagogisk-psykologiska frågor. /The in-service training needs of junior level teachers concerning educational and psychological matters./ Pedagogisk-psykologiska problem, No. 175, 1972.

Heiling, G. PIL. Pedagogiken i lärarutbildningen: Erfarenheter från försöksverksamheten vårterminen 1972. /Education in teacher training: Experience derived from the experimental activities during the spring term 1972./ Stencil, 1973.

Holmkvist, N.O., Löfqvist, G. et al. Undervisning i lärarlag i samverkan pedagogik-metodik-praktik. /Team teaching with collaboration between pedagogics, methods and teaching practice./ Pedagogiska hjälpmedel, No. 13, 1974.

Johansson, L. Pedagogiken i lärarutbildningen: En förteckning över tryckta läromedel. /Education in teacher training: An inventory of printed teaching materials./ Pedagogisk dokumentation, No. 14, 1972.

Johansson, L. Pedagogiken i lärarutbildningen: En förteckning över undervisningsfilmer. /Education in teacher training: An inventory of teaching films./ Pedagogisk dokumentation, No. 17, 1973.

Löfqvist, G. Analys av officiella texter för bestämning av kraven på ämneslärarbefattningen. /An analysis of official texts with a view to determine the qualifications necessary for grammar school teachers./ Pedagogisk-psykologiska problem, No. 107, 1969.

Löfqvist, G. Läroplanerna för grundskolan 1962 och 1969: En jämförelse mellan läroplanerna med särskild inriktning på kraven på ämneslärare-ren. /The curricula of the common school of 1962 and of 1969: A comparison of the curricula with special emphasis on the subject teacher./ Pedagogisk-psykologiska problem, No. 136, 1971. (a)

Löfqvist, G. Arbets- och utbildningskrav för ämneslärarkandidater. /What demands are made on the subject teacher in the school situation and how should these demands influence the pre-service training program?/ Pedagogisk-psykologiska problem, No. 156, 1971. (b)

Mårtensson, L.-G. Preliminär resultatredovisning rörande en intervjuundersökning inom PIL-projektet. /Preliminary presentation of findings from an interview survey within the PIL project./ Stencil, 1973.

Rodhe, B. & Gran, B. (Eds.) New patterns of teacher tasks: A report on Swedish experience in the Malmö region. Paris: OECD, 1973.

Wiechel, L. Ett rollspel i lärarutbildningen: En variansanalytisk studie jämte principer för metodval och konstruktion av utbildningsspel. /Role-playing in teacher training: An analysis of variance and an outline of means in constructing educational games./ Pedagogisk-psykologiska problem, No. 108, 1970.

Wiechel, L. Gruppdynamik och rollspel i lärarutbildningen. /Group dynamics and role-playing in the training of student teachers./ Pedagogiska hjälpmedel, No. 11, 1973.

BEST COPY AVAILABLE

STUDIES OF CLOSED-CIRCUIT TELEVISION (CCTV MALMÖ)

Contacts: Bertil Gran, Bernhard Bierschenk

The research and development project called "CCTV Malmö" has consisted of two sub-projects, called here CCTV-S and CCTV-M, in which S stands for "self-confrontation" and M for "model development".

CCTV-S

Background and purpose

The development of closed-circuit television systems and video-recorders permits a more systematic and controlled study of processes of interaction. In order to study the possibilities of using these procedures within teacher training, an experimental study was carried out with the aim of examining what effects externally mediated self-confrontation (via closed-circuit television, CCTV, and video-recording, VR) and dyadic confrontation (in the form of traditional tutoring) respectively have on the student teachers' perception and evaluation of their own teaching performances.

Assessments made by educational experts have been used as an external criterion of the actual behavior of the student teachers during the lessons. The average assessments of the experts was thereby taken as the starting-point for the definition of the "degree of objectivity" of the student teachers' perception and evaluation of their own teaching behavior.

To summarize, the main objectives can be said to have been

to study the effect on selected behavioral aspects of external "listening-in" to one's own lessons mediated via CCTV and VR

to study possible changes in the student teachers' perceptual field in the evaluations of their own teaching on different occasions with varying intervals [illegible]e

to study the [illegible]nt teacher's self-assessment and estimation of his own teaching in a micro-lesson in relation to the estimations of a panel of pedagogical experts.

Experimental design of the study

In order to achieve the maximum degree of control over possible interpretations of the results of the study, a factorial design was drawn up. The different factors in the design are:

Factor H: Traditional tutoring, where
h_1: tutoring; h_2: no tutoring

Factor T: Self-confrontation mediated externally via CCTV/VR, where
t_1: self-confrontation; t_2: no self-confrontation

Factor U: Micro-lessons (length 15 min.), where
u_1: micro-lesson 1; u_2: micro-lesson 2

The experiment was carried out at the Department of Educational and Psychological Research at the Malmö School of Education. As a result of technical and staffing limitations, the experiment was divided into two phases. Both phases were conducted in the School of Education's CCTV studio and two adjoining laboratories.

During the spring term of 1969 the first phase was carried out, in which micro-lessons were given, (1) followed by traditional tutoring only and (2) followed by externally mediated self-confrontation via CCTV/VR only. - During the spring term of 1970 the second phase of the experiment was carried out, consisting both of micro-lessons followed by externally mediated self-confrontation via CCTV/VR and traditional tutoring, and of micro lessons alone.

In order to increase the precision of the design, two additional factors were included in the original design, i.e.

Precision factor V: Assessment and evaluation schedule
$v_1, \ldots, v_{79}$, statements of which the measuring instrument consists.

Precision factor A: Aspects of the instrument. Each statement contains two different aspects, where
a_1: perception aspect; a_2: evaluation aspect.

The whole ANOVA model can be written as A, U, T, H, I(TH), V, where I denotes the factor representing the individuals.

Sample of subjects and pupil groups in the experiment

The experiment was based on the population available at the Malmö School of Education, consisting of approximately 240 student teachers, who were admitted to the School of Education in the autumn terms of 1967 and 1968 for training as class teachers in grades 4-6. The population was divided into three strata: (1) female students who had their final school certificate from the gymnasium, (2) male students who had their final school certificates from vocational school or equivalent education.

Since the female students form an absolute majority in this course of

training and since we wanted to avoid possible variations as a result of sex or educational background, strata 2 and 3 were excluded from the sample. From the remaining group of a total of 133, a random sample of 96 was taken and these participated as the subjects of the experiment. All the pupil groups (half classes) that participated during the school years 1968/69 and 1969/70 as teaching groups came from the fourth grade of Munkhätte School. Each grade consists of six parallel classes with 25-30 pupils in each class. During the two school years a total of about 360 pupils participated. Each class was divided at random into two half classes.

Measuring instrument

The development of the measuring instrument "assessment and evaluation" started with a preliminary experiment (spring term 1968). Two different kinds of data were considered to be of special interest for the experiment, in order to elucidate the reactions of the student teachers to the experiment's forms of influence: (1) the student teachers' spontaneous and simultaneous comments and (2) the student teachers' reactions to a detailed catalogue of written statements, which had been constructed on the basis of a content analysis of spontaneous comments to the recorded lessons collected during the preliminary experiment. The problem areas which emerged from the student teachers' simultaneous comments during the process of self-confrontation have been categorized according to the following six dimensions constructed a priori:

1. Ego-ego relation
2. Ego-pupil relation
3. Ego NPO relation (i.e. relations between ego and non-personal objects)
4. Pupil-ego relation
5. Pupil-pupil relation
6. Pupil-NPO relation (i.e. relations between pupil and non-personal objects)

For the study of possible connections between the experimental results and different personality variables, a test battery consisting of 18 different tests was administered.

Data treatment and data processing

The primary subject for analysis was the assessment and evaluation schedule (F III), since for this instrument there is data for the complete design. We have for these data carried out: (1) descriptive statistics, (2) reliability estimations, (3) analyses of variance and analyses of dimension. There are also data on the power of the statistical tests used.

BEST COPY AVAILABLE

Some results concerning the main effects of the experiment

In order to find out to what extent the experiment was felt to be something exceptional compared to the usual teaching situation, three attitude questionnaires were constructed and administered to (1) the teaching staff at the School of Education, (2) the student teachers who had not participated in the experiment, and (3) the student teachers who did participate in the experiment. All three groups felt that the experiment was important for teacher training and considered that continued research into the use of CCTV in teacher training should be carried out on a large scale. In addition, the student teachers who had participated in the experiment felt it to be both enjoyable and valuable for the development of their own personalities.

In the analysis of the data obtained from the experimental model, a step-wise evaluation was applied in order that reliable conclusions might be drawn.

In connection with the examination of the results from the analysis of variance of the student teachers' perception and evaluation of their own micro-lessons, six different categories of subject-object relations were studied. No difference could be shown between externally mediated self-confrontation via CCTV/VR techniques or dyadic confrontation in traditional tutoring. Nor have any demonstrable interaction effects between both factors been found.

The experiment's teaching occasions (micro-lesson 1 and 2) led to demonstrable effects in the ego-dimension, but not in the pupil-dimension. This result suggests that the subjects of the experiment have changed their perception and evaluation irrespective of the combination of influences.

The assessments made by the educational experts of the student teachers' micro-lessons have not shown any effects with regard to externally mediated self-confrontation via CCTV/VR. The traditional tutoring in the form of dyadic confrontation has on the other hand led to demonstrable changes in the behavior of the student teachers. The average assessment indicated differences both in the pupil-ego relation and the pupil-pupil relation. Within both variable domains, however, only small effects occur and the result must be regarded as being a relatively uncertain basis for interpretation.

According to the educational experts, the micro-lessons have also led to demonstrable effects with regard to the ego-NPO, pupil-ego and pupil-pupil relations. An examination of the precision and power of this result shows, however, that in this case too the result can hardly be said to provide a conclusive basis for interpretation.

BEST COPY AVAILABLE

The examination of the objectivity of the self-assessment of the student teachers in the analysis of variance has been carried out in order to show possible variations in the difference values that have been calculated on the basis of the student teachers' self-assessment and the average assessments of the educational experts. Irrespective of whether or not demonstrable effects have been found within each single collection of data, it is quite conceivable that the experimental influence had led to differences, i.e. variations in the "objectivity" of the subjects of the experiment.

No demonstrable difference as far as the experimental factors externally mediated self-confrontation via CCTV/VR and dyadic confrontation in the form of traditional tutoring has been found. In the assessment of the extent to which their own teaching behavior has changed from lesson 1 to lesson 2, the assessment of the student teachers varies demonstrably in relation to the criterion of objectivity. The differences are greatest in connection with micro-lesson 1 and diminish relatively sharply in the assessment of micro-lesson 2.

In order to examine whether there are significant correlated dimensions in the perception and evaluation of, on the one hand, the educational experts and on the other, the student teachers, canonical correlation analyses were carried out for each summation variable. These analyses show that there are significant correlated dimensions, but that the similarities are greater in the perception structure than in the evaluation structure.

Follow-up studies show that neither the perception nor the evaluation of student teachers changes appreciably during the period of training (the interval between the experiment and the follow-up was two years). The canonical correlation analyses of both student teachers' perception and evaluation and educational experts' perception and evaluation of teaching processes, in addition, show that the evaluation structures of student teachers and educational experts have no demonstrable connection, either at the beginning or the end of the training period.

The follow-up investigation further showed within the self-evaluation dimension that the student teachers' self-evaluations on the first confrontation occasion (when the teaching occasion is held constant) is more positive than on the second and third play back of the experiment's video-recorded material. This result implies that the student teachers need several play backs (between 3-6) of the same situation if they are really to be able to make evaluative changes themselves.

Since we have only been able to indicate very briefly selected results here, it should be mentioned in conclusion that the studies outlined above,

the results and certain recommendations have been presented in detail and discussed in a number of references (see in particular Bierschenk, 1972c, 1974b).

Remaining work

The analysis tasks that remain and are now the object of analysis within a new project supported by the Swedish Council for Social Science Research are concerned with the significance of the personality for the individual's perception and evaluation of a confrontation with his own behavior in video-recorded situations.

CCTV-M

Part M has for several years been in the nature of developmental work that has been steered by the immediate need to produce CCTV programs for teacher training. In connection with the production and use of CCTV programs in teacher training, a number of minor measurements have been made of the attitudes of those participating and those at the receiving end.

Within Part M of the CCTV project what has been called a simulator test has also been constructed and tried out experimentally on the students taking the class teacher course.

In addition, studies have been made for the purpose of investigating how CCTV functions as a integrated part-system in teacher training. Each of these three sub-areas are described briefly.

Production of CCTV programs

When CCTV was first introduced into teacher training, there was a general impression that one would be able in various ways to improve teacher training and make it more effective. In the report "Användning av ITV i lärarutbildningen" ("The use of CCTV in teacher training"; Gran, 1967), the different advantages that the use of CCTV can be expected to give have been discussed. Some of the hypotheses presented there have been tested against the actual trends of the production and against the frequency with which the programs produced are used, etc. Further, the design and the development of the technical equipment have been analyzed.

Construction of simulator tests

The simulator tests first constructed (Bjerstedt, 1968) have been analyzed from the following points of view

(1) What are the reactions of the student teachers in these simulator situations?

(2) How important are the actual setting and general information respectively for the willingness to react?

BEST COPY AVAILABLE

(3) What differences are there between the reactions to stimuli presented in writing and to stimulus situations presented by video-recorder?

The results from these analyses have been described in two reports (Engfeldt, 1971; Hedman, 1973). Using these results and studies conducted within another project (called "Education in teacher training") as a basis, new simulator tests have been constructed and tried out.

CCTV as a part of teacher training

Even if the work described under points (a) and (b) can be said to form a part-study as far as the effect of the use of CCTV in teacher training is concerned, it has been thought necessary to conduct a more comprehensive investigation into how CCTV functions within teacher training. This has been done by means of interviews with about 20 "key persons" and questionnaires given to all student teachers in their final term at Malmö School of Education, to teachers at the experiment and demonstration school, and to teachers of methodology and education. The following aspects have been considered: a) Administrative problems, b) Production questions, c) Educational content, d) Technical conditions and e) Future development.

References

Bierschenk, B. Television as a technical aid in education and in educational and psychological research: A bibliography. Didakometry, No. 24, 1969.

Bierschenk, B. Television as a technical aid in education and in educational and psychological research: A bibliography (continued). Didakometry, No. 29, 1971. (a)

Bierschenk, B. Television as a technical aid in education and in educational and psychological research: A bibliographic account of German literature. Didakometry, No. 31, 1971. (b)

Bierschenk, B. An English digest: Self-confrontation via closed-circuit television in teacher-training together with recommendations for further research. Reprint (Malmö, Sweden: School of Education), No. 119. (a)

Bierschenk, B. Att mäta subjekt-objekt-relationer i externt förmedlade självkonfrontationsprocesser via intern television: Presentation av ett kategorisystem. (Rev. ed.) /The measurement of subject-object relationships in externally mediated self-confrontation processes via closed circuit television. Presentation of a category system./ Testkonstruktion och testdata. No. 6, 1972. (b)

Bierschenk, B. Self-confrontation via closed circuit television in teacher training: Results, implications and recommendations. Didakometry, No. 37, 1972. (c)

Bierschenk, B. Självkonfrontation via intern television i lärarutbildningen. /Self-confrontation via closed circuit television in teacher training./ (Studia psychol. et paedag., 18.) Lund: Gleerup, 1972. (d)

Bierschenk, B. Självkonfrontation via intern television i lärarutbildningen: Test och testdata. /Self-confrontation via closed-circuit television in teacher education: Tests and test data./ Testkonstruktion och testdata, No. 12, 1972. (e)

Bierschenk, B. Television som tekniskt hjälpmedel i utbildning och pedagogisk-psykologisk forskning: En bibliografisk redovisning och explorativ utvärdering av litteratursökning med hjälp av dator. /Television as a technical aid in education and in educational and psychological research: A bibliographic account and an explorative analysis of computer-based search for literature./ Pedagogisk dokumentation, No. 19, 1973.

Bierschenk, B. Perceptual, evaluative and behavioral changes through externally mediated self-confrontation. Didakometry, No. 41, 1974. (a)

Bierschenk, B. Självkonfrontation i lärarutbildningen: Lärarkandidater bedömer egna videobandade lektioner - en uppföljningsstudie. /Self-confrontation in teacher training: Student teachers assess their own videotaped micro-lessons - A follow-up study./ Pedagogisk-psykologiska problem, No. 244, 1974. (b)

Bjerstedt, Å. CCTV and video-recordings as "observation amplifiers" in teacher training. Educ. TV Int., 1967, 1, 300-312.

Bjerstedt, Å. Att mäta interaktionstendenser: Notiser från ett par testkonstruktiva preliminärförsök. /Measuring interaction tendencies: Notes from preliminary test constructions./ Testkonstruktion och testdata, No. 3, 1968.

Bjerstedt, Å. Critical decision situations on videotape:An approach to the exploration of teacher's interaction tendencies. Didakometry & Sociometry, 1969, 1, 54-76.

Engfeldt, P. -H. Ett videobandat simulatortest för studium av interaktionstendenser i lärar-elev-situationer: Utarbetande och stegvis exploration av kategorisystem för ostrukturerade svarsreaktioner. /A video-recorded simulator test for studying interaction tendencies in teacher-pupil-situations: Construction and gradual exploration of category systems for the analysis of unstructured responses./ Testkonstruktion och testdata, No. 10, 1971.

Gran, B. Användning av ITV i lärarutbildningen. /The use of CCTV in teacher training./ Mimeogr. rep. Malmö: School of Education, 1967.

Gran, B. ITV-Malmö: En översikt över 10 års forsknings- och utvecklingsarbete. /CCTV at Malmö School of Education: An overview of 10 years of research and development work./ Pedagogisk-psykologiska problem, No. 221, 1973.

Hedman, B. Ett simulatortest för studium av interaktionstendenser: Några kompletterande data. /A simulator test for the study of interaction tendencies: Some supplementary data./ Testkonstruktion och testdata, No. 21, 1973.

JOB ANALYSES AS A BASIS FOR TRAINING AND FURTHER EDUCATION IN THE SCHOOL SECTOR: SCHOOL PRINCIPALS, LECTURERS IN METHODOLOGY AND TUTORS (Project B1)

Contacts: Kurt Gestrelius, Alger Klasson

Background

During the second half on the 1960's, the question of regular training for school principals and teacher trainers came under discussion. A natural consequence of this was to carry out a systematic planning of training for these appointments.

As a result of changes in society, new jobs are developed and older ones undergo changes. New or modified jobs often lead to demands for training. Within the school sector as in other sectors of society, the planning of training has usually been based on the experiences of a small group of people, with the subsequent risk that decisions are made on a very unreliable basis. Those working on Project B1 thought it probable that those responsible for the future development of the school sector would gain by having access to basic material that had been gathered by more systematic methods. What is known as job analysis was considered to be an important instrument for the planning of training.

When working on the planning of job training, one sometimes receives requests not only to map the tasks with which the job-holders are faced in the opinion of themselves and their closest contact groups, but in addition to map the different needs of the community as a whole that are satisfied by means of the appointments in question. These requests appear to imply that a particular appointment is placed in the total social context and that one then examines which social needs it is intended to satisfy. Those responsible for Project B were of the opinion, however, that they did not have a sufficiently comprehensive grasp of the community's general need for these combinations of services that constitute appointments to be able to carry out a macro-analysis of that type.

Job analyses can also be carried out with the experiences of the job-holders in question and a few of their contact groups as the primary source. Generally speaking, the analysis methods used by the project involve selecting certain jobs and studying them from the inside - starting with the

BEST COPY AVAILABLE

viewpoints of the job-holders and their contact groups. The job was taken to be something separate from the job-holder and was looked upon as being the social positions which were constituted by the obligations and rights that were linked with the positions. Job-holder is the name given to those who have been appointed to take upon themselves and practise these obligations and rights.

The type of training planning dealt with here is based on a very simple model in which people are placed in situations that they may only be able to master after training (see Figure 1). According to this model, the individual is imagined to pass through a series of "problem situations", and his actions bear witness to his way of tackling the problems. It is important in a complex stimulus situation to be able to distinguish between relevant and irrelevant stimuli. To be able to make this distinction, one needs to have had experiences that create a state of readiness for action.

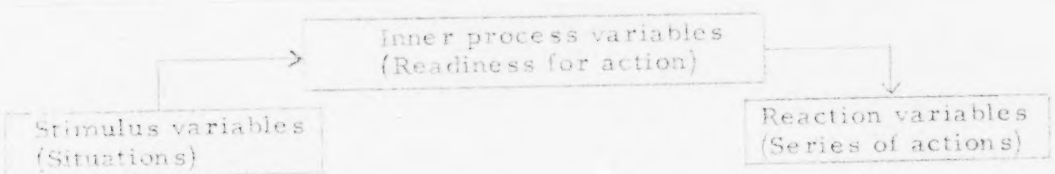


Fig. 1. Model showing psychological concepts on which the educational planning is based

The stimulus constellations are assimilated (inner processes), and this assimilation results in decisions and actions. When planning job training one can first try to map the stimulus constellations (situations) that are characteristic for the job in question. One can then try to find out what special knowledge, skills and attitudes make it easier to take suitable action in the situations in question (readiness for action).

Aims

The general aim of Project BI has been to carry out job analyses and determine what training is needed for the above-named appointments within the school sector, using as a basis representative and empirical information material that has been systematically analyzed for content. A further aim has been to show, during the course of this work, that the results obtained at the various stages are in their turn based representatively on the empirical material. The aims of the project can be summarized in the following way:

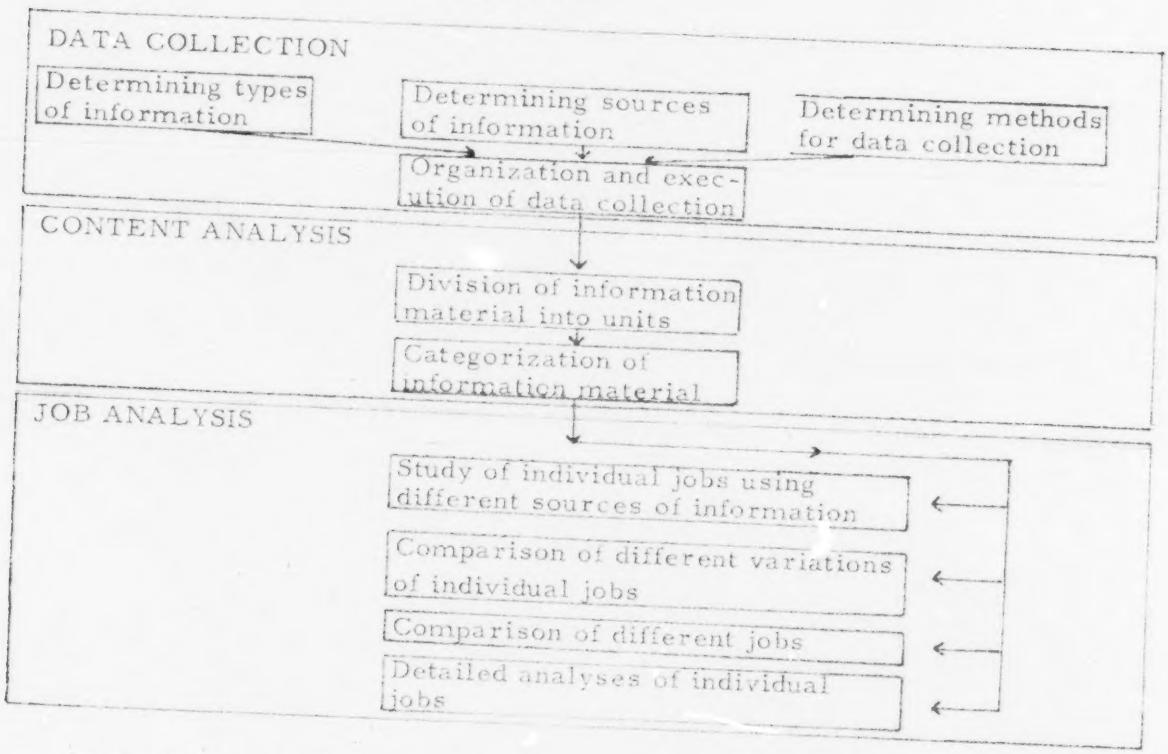
BEST COPY AVAILABLE

1. To design job analyses for headmasters/mistresses and directors of studies in the comprehensive school and for lecturers in methodology and tutors.
2. To design suitable routines for obtaining job descriptions to be used for training purposes within the school sector.

Execution

The work on the job analyses has been carried out in accordance with the model presented in Box 1.

Box 1. Plan of work for job analysis.


DATA COLLECTION
Determining types of information
Determining sources of information
Determining methods for data collection
Organization and execution of data collection
CONTENT ANALYSIS
Division of information material into units
Categorization of information material
JOB ANALYSIS
Study of individual jobs using different sources of information
Comparison of different variations of individual jobs
Comparison of different jobs
Detailed analyses of individual jobs

In the initial phase of Project B1 a theoretical analysis was made of the problems that could turn up in connection with the planning of training by means of job-analytical methods. Some suggestions as to practical solutions for these problems were also made (Gestrelius, 1970b). A method for selecting job-holders with tasks of a regional nature was worked out (Alehammar, 1969). Different forms of data collection were tried out (Fredriksson, 1972; Gestrelius, 1972a).

A two-step method of collecting data was used in the project, based on interviews with a limited number of respondents. Information about the tasks of the job-holders was collected as follows: 1. data collection with free, explorative interviews; 2. data collection with controlled interviews.

The material that was used for job analyses and job descriptions was subjected to a systematic analysis of content. The content analysis was carried out in two stages. The first stage involved dividing the material into job situations expressed in concrete terms, such as "trying as lecturer in methodology to coordinate and integrate the content of the different subjects in teacher training". The second stage in the content analysis involves both the construction of category systems (one for school principals and one for teacher trainers) and the classification of the information material according to the respective category system. In connection with the content analysis, some method studies and reliability checks were carried out (Gestrelius, 1970a, 1971a).

On the basis of the material analyzed for content, job descriptions were worked out for lecturers in methodology and tutors (Gestrelius, 1972b, 1971b) and for school principals (Klasson, 1974). The account of the tasks of the teacher trainers has been divided into two reports. Part I (Gestrelius, 1972b) presents a survey of the methods of investigation and some comparisons between job descriptions based on material from different sources of information. This part also contains summaries of detailed analyses of the tasks of teacher trainers. Part II (Gestrelius, 1971b) presents detailed descriptions of the jobs of lectures in methodology and tutors and an abundant collection of tasks that are part of the jobs. Klasson (1974) discusses the usability of the interview method when collecting data about jobs, positions, and presents a detailed description of the work of school principals. The reports on the job descriptions of the teacher trainers and school principals complete and terminate the project "Job analyses as a basis for training and further education within the school sector: School principals, lecturers in methodology and tutors" (Project B1).

Measures for the practical use of the results of the project

A project as protracted as Project B1 can naturally not be permitted to hold up all other current development activities concerning the training of school principals and teacher trainers. In this respect it has been considered reasonable that the training examined here develops along two parallel courses. One traditional, in which rapid changes are made in the training as a result of the experiences of individual persons (expert groups) and without systematic investigations, and one more systematic and long-term, in which behavioral scientific methods are used to obtain goals and content in the training. Sometimes, however, the expert groups working traditionally can make use of material collected and processed by means of be-

havioral scientific methods. An example of this is the cooperation between the National Board of Education's expert group for tutor training (LUR 12) and Project B1. This group made use of the material concerning the tutors that had then been collected and processed by the project.

Another expert group, the Teacher training Committee (LUK), commissioned to put forward proposals for the training of teachers in subjects such as drawing, physical training, wood and metal work, textile handicraft, domestic science and child care, has utilized Project B1's experiences when making job analyses for the teaching jobs named. These job analyses were carried out by means of direct cooperation between LUK and Project B1.

References

Alehammar, S. Förenklad metod för urval av befattningshavare med regionalt betingade arbetsuppgifter. /Simplified method of sampling office-holders with regionally specific tasks./ Pedagogisk-psykologiska problem, No. 79, 1969.

Fredriksson, L. Självobservation som datainsamlingsmetod vid befattningsanalys. /Self observation as a method of data collection in job analysis./ Pedagogisk-psykologiska problem, No. 163, 1972.

Gestrelius, K. Exempel på metod för tillförlitlighetskontroll vid analys av informationsmaterial. /Examples of a reliability control method in the analysis of information material./ Utbildning och utveckling, 1970, 2, 16-24. (a)

Gestrelius, K. Utbildningsplanering med befattningsanalytiska metoder. /The planning of training programs with job-analytical methods./ Lund: Uniskol, 1970. (b)

Gestrelius, K. Kategorisering av informationsmaterial vid befattningsanalys: Metodexempel. /The categorization of information material in job analysis: Examples of methods./ Utbildning och utveckling, 1971, 3, 6-31. (a)

Gestrelius, K. Lärarutbildares arbetsuppgifter, Del II: Detaljerade beskrivningar av metodiklektorers och handledares befattningar. /The duties of teacher trainers, part II: Detailed descriptions of the jobs of lecturers in methodology and tutors./ Pedagogisk-psykologiska problem, No. 152, 1971. (b)

Gestrelius, K. Job analysis and determination of training needs. (Studia psychol. et paedag., No. 19.) Lund: Gleerup, 1972. (a)

Gestrelius, K. Lärarutbildares arbetsuppgifter, del I: Undersökningsmetoder, övergripande befattningsbeskrivningar samt sammanfattningar av detaljanalyser. /The duties of teacher trainers, part I: Methods of research, surveys of job descriptions and summaries of detail analyses./ Pedagogisk-psykologiska problem, No. 151, Rev.ed., 1972. (b)

Klasson, A. Skolledare i grundskolan: Beskrivning av arbetsuppgifter med intervjudata som bakgrund. /School principals in the comprehensive school: Task descriptions based on interview data./ Pedagogisk-psykologiska problem, No. 245, 1974.

BEST COPY AVAILABLE

JOB TRAINING IN THE EDUCATIONAL SECTOR (Project B2)

Contacts: Kurt Gestrelius, Alger Klasson, Lennart Fredriksson

Background

The project is a direct continuation of the earlier project "Job analyses as a basis for training and further education in the school sector: School principals, lecturers in methodology and tutors".

If job descriptions and the content analyzed material are to be used in the planning, execution and evaluation of training, systematic follow-up work divided into several different stages has to be carried through. It is these additional stages that are primarily dealt with in the project "Job training in the educational sector" (Project B2). The way in which those planning the training solve the tasks linked with each stage will be decisive for how far the job descriptions and the content analyzed material can be used in training. Since content analysis and job analysis take a great deal of time and work, it is surprising that the working processes that are needed for the training to be able to profit by these analyses have not been paid more attention in the educational literature than hitherto.

Aims

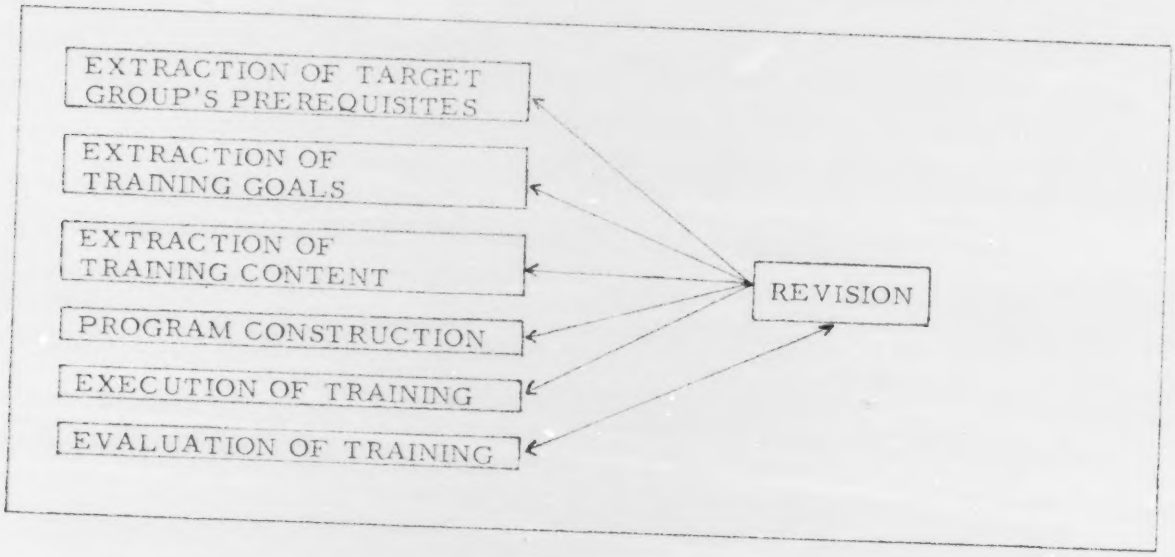
The basis for the work consists of a general model for planning, execution, evaluation and revision of job training. (See Box 2.)

The major aim of Project B2 is to work out and apply, on the basis of job descriptions and content analyzed information material, the stages of the work concerning goal determination, content determination and program construction in such a way that content analyses and job analyses really are made use of when the training is being planned.

In addition, the routines worked out within the B1 and B2 projects during the work on school principals and teacher trainers have also been applied to some new groups. These sub-studies, which to some extent may be regarded as separate projects, are also briefly described below.

BEST COPY AVAILABLE

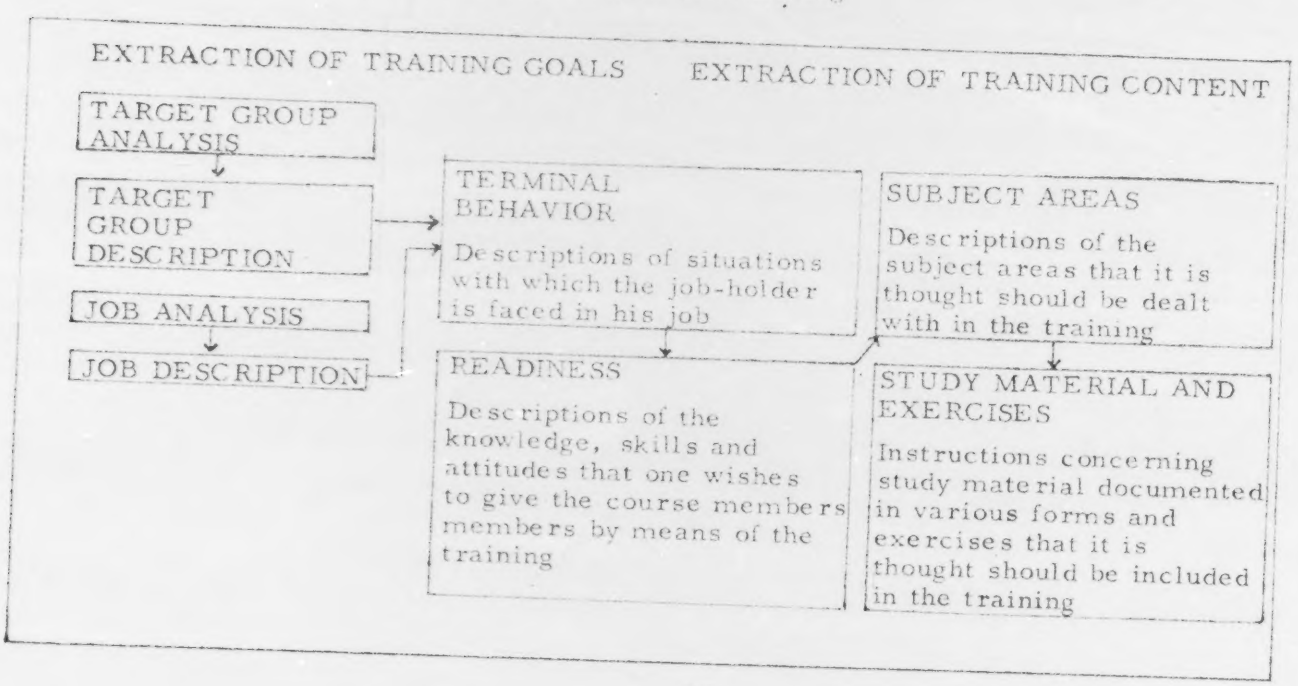
Box 2. General model for planning, execution, evaluation and revision of job training



Execution

As far as the extraction of training goals and training content are concerned, the execution of the project follows a general model as shown in Box 3.

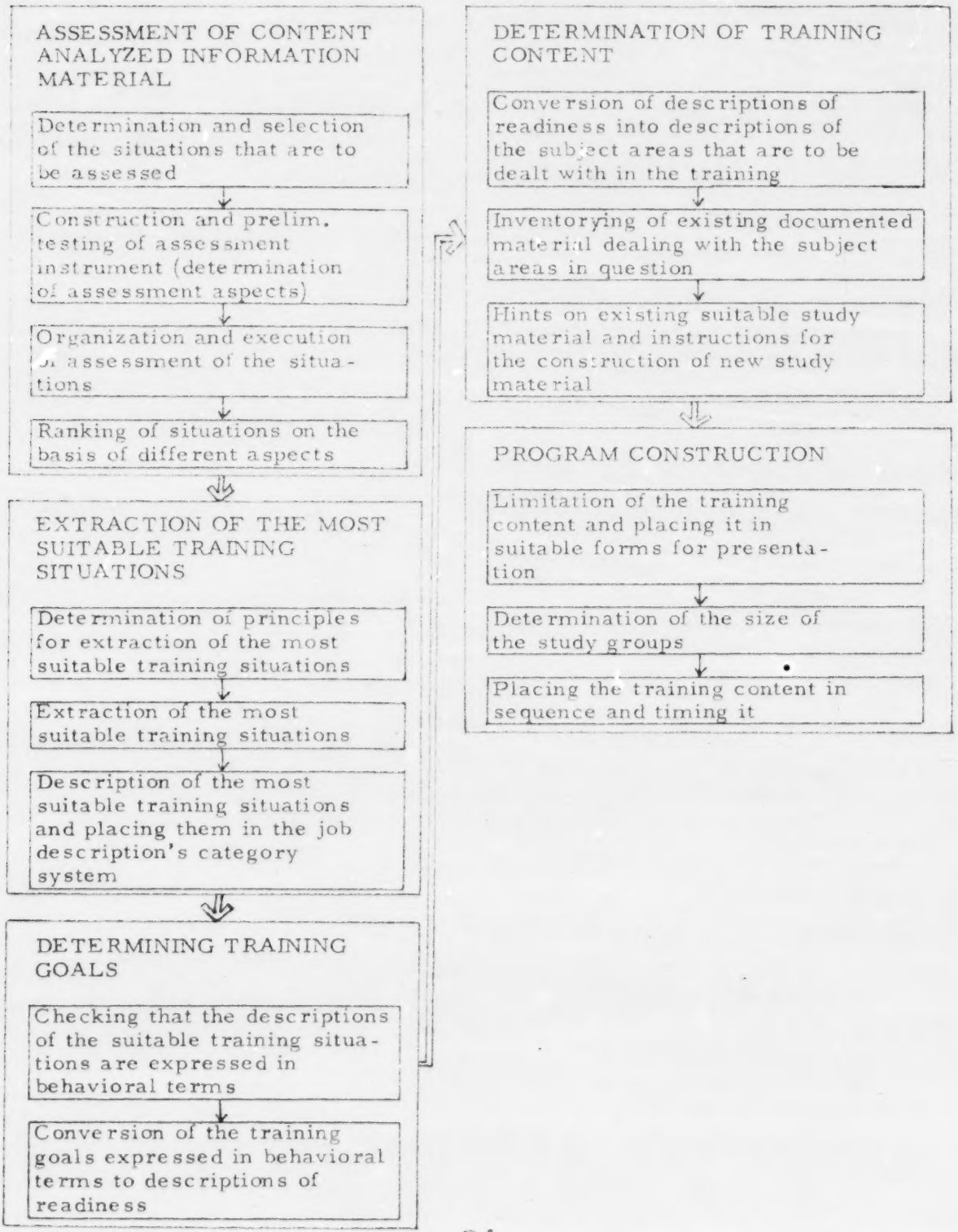
Box 3. General model for extraction of training goals and training content in the planning of job training


EXTRACTION OF TRAINING GOALS
EXTRACTION OF TRAINING CONTENT
TARGET GROUP ANALYSIS
TARGET GROUP DESCRIPTION
JOB ANALYSIS
JOB DESCRIPTION
TERMINAL BEHAVIOR
Descriptions of situations with which the job-holder is faced in his job
READINESS
Descriptions of the knowledge, skills and attitudes that one wishes to give the course members members by means of the training
SUBJECT AREAS
Descriptions of the subject areas that it is thought should be dealt with in the training
STUDY MATERIAL AND EXERCISES
Instructions concerning study material documented in various forms and exercises that it is thought should be included in the training

BEST COPY AVAILABLE

The work processes that can be used for the extraction of topical training situations, assessment of training goals and training content, and program construction are presented in Box 4.

Box 4. Work processes for the extraction of training goals and training content and for program construction


ASSESSMENT OF CONTENT ANALYZED INFORMATION MATERIAL
Determination and selection of the situations that are to be assessed
Construction and prelim. testing of assessment instrument (determination of assessment aspects)
Organization and execution of assessment of the situations
Ranking of situations on the basis of different aspects
EXTRACTION OF THE MOST SUITABLE TRAINING SITUATIONS
Determination of principles for extraction of the most suitable training situations
Extraction of the most suitable training situations
Description of the most suitable training situations and placing them in the job description's category system
DETERMINING TRAINING GOALS
Checking that the descriptions of the suitable training situations are expressed in behavioral terms
Conversion of the training goals expressed in behavioral terms to descriptions of readiness
DETERMINATION OF TRAINING CONTENT
Conversion of descriptions of readiness into descriptions of the subject areas that are to be dealt with in the training
Inventorying of existing documented material dealing with the subject areas in question
Hints on existing suitable study material and instructions for the construction of new study material
PROGRAM CONSTRUCTION
Limitation of the training content and placing it in suitable forms for presentation
Determination of the size of the study groups
Placing the training content in sequence and timing it

In the view of the project, a description of training goals should state both what a member of the course should be able to achieve after the training and what knowledge, skills and attitudes should be imparted to the course members if they are to reach that level of achievement. The achievements are called "terminal behavior". Knowledge, skills and attitudes are termed "readiness". According to the approach chosen here, a description of training content should both state the subject areas within which those being trained are to pursue studies and exercises, and provide information about different kinds of documented study material and exercises within these subject areas. One possible technique for converting training goals expressed in behavioral terms into readiness descriptions is the following. Assessors should be presented with a situation described as a training goal and given the question, "What knowledge, skills and attitudes can be thought to be necessary for a job-holder to be able to deal satisfactorily with this situation?" The assessors should then in this way go through all the situations that have been extracted as being suitable for training. This procedure can provide a list of readiness descriptions linked with the situations suitable for training.

The technique for converting readiness descriptions into descriptions of training content can in principle be the same as the abovenamed conversion of situations. It would then be possible for the assessors to take a readiness description as their starting point and put the question, "Which subject area(s) should the trainees study in order to obtain the desired degree of readiness?"

The content units obtained in these ways will be used in the construction of training programs. The content units are to be placed in suitable forms for presentation, taking into consideration the work forms that have been chosen for the training. The sequence in which the content units are to come must be decided and a timetable for the training drawn up.

In different contexts the project has discussed various methodological questions related to the general approach sketched here (cf., e.g., Gestrelius, 1973-74). - At an early stage, an experimental course for school principals was conducted and evaluated (Alehammar, 1971).

An experimental course for teacher trainers was carried out in 1974. The material used in this course was based on situations likely to require training. These situations were assessed by experts who answered the question "What knowledge, skills and attitudes can be considered necessary for a job-holder to be able to deal satisfactorily with this situation?" Experimental assessments were carried through i.a. in order to study the

degree of "consensus" between different assessors. - Twelve training units were built up based in the main part on the material. These units were presented in the experimental course for teacher trainers. (Cf. Gestrelius, Kristoffersson & Lindqvist, 1974.)

Some special sub-projects

Within the framework of project B2 a sub-project "Analysis of the jobs of teachers in the labor market training as basis for training" (Fredriksson, 1974) has been carried out.

The aim of this study has been to make an inventory of problems that teachers in the labor market training (LMT) meet in their jobs. This inventory would then provide a basis for future training.

The methods for data collection used have been a modified form of the critical-incident technique, interview and questionnaire. 149 teachers, 78 students and 61 administrators from within LMT have participated in the investigations during different periods. The project, which was conducted during the school year 1972/73, can be divided into three main phases.

The first phase, which occurred during the autumn of 1972, consisted of a data collection using a critical incident diary, in which the subjects were to note each day for six weeks that day's most difficult task. A follow-up interview was held with all those who had kept such a diary.

Phase two consisted of a content analysis of the collected material. Experienced LMT teachers were asked to contribute expert advice in the construction of a categorizing schedule and the sorting of units into the schedule. An analysis was also made of information saturation.

The third phase consisted of an assessment of the collected data. An assessment questionnaire was constructed, using material from the diary phase as a basis. Experienced LMT teachers were employed for the construction work, which was also checked. Teachers, students and administrators in LMT were selected to assess the material in the questionnaire from five aspects: occurrence, training need, time, present and future.

As can be seen, an effort has been made to maintain a close field contact throughout entire study. This facilitates communication between researchers and consumers.

Analyses have been made of differences between the different coder groups in the aspects named above. In the majority of the assessments, no differences could be ascertained. The aspect that showed most differences was training need. In this aspect analyses have been made concerning differences between LMT teachers with different background variables. On

BEST COPY AVAILABLE

the whole the coders assess the data in a similar way. The background variable that produces most differences is the teachers' professional training. The problem situations that receive high values in all aspects deal with the lack of training in one's own branch to keep up with the rapid technical development, the welfare element in the jobs of LMT teachers and the heterogeneous student groups. The differences between the trainees in the groups are intensified by the system of continuous intake and by the immigrants' deficiencies in the Swedish language. The situations presented can be said to have a particular need for training.

The problem situations that get low values in all aspects mainly concern difficulties in relationships between different groups and individuals with the LMT organization.

When comparing the level of the assessments in the different aspects, one often finds high values in the occurrence and future aspects, but low values for the same tasks in the training need aspect. The difficult situations are considered frequent and important but not to require training. The difference of level in the scales between these aspects can be explained, however. It must be much easier for the coders to say how frequent and important a problem situation is than to estimate the need for training. Experienced educational planners would probably find it easier to see the connection between the situation and the training required.

Although the training need aspect has an important place in this study, our aim has been to make the other aspects equally important when judging how urgent the need for training is in the various situations. It should also be remembered that only difficult situations have been collected. These are in themselves interesting from a training point in view.

The inventory and the analysis of difficult tasks faced by LMT teachers in their jobs that have been presented in this study should be of use as a starting point when basic training and further training for teachers in LMT are being planned. The task force "Investigation and proposals concerning the training and appointment of teachers in labor market training" (AMU/L 1970) has in its report discussed problems that are closely connected with those discussed in this study. Since the task force has not worked with empirically collected data, the results obtained in the present report could possibly provide a basis for necessary decisions. The committee for reviewing LMT (KAMU), which started work in 1972 and is to produce its findings in 1979, should also be able to obtain relevant information from this account. It would be conceivable to use the collected and assessed material as a basis for planning training for LMT teachers. Such training

could be included as part of the regular training of vocational teachers in the technical vocational courses at the Schools of Education and should then be regarded as basic training. It should also be possible to use certain parts of that training section as in-service training for active LMT teachers.

Another special sub-project deals with analyses of the tasks of principals in the people's high school. The aims of this investigation can be described by the following four questions:

1. What content do the tasks of the principals of the people's high school have?
2. How are the tasks of the principals of the people's high school related to the tasks of the principals in the compulsory school?
3. What developing tendencies in the tasks of the principals of the people's high school can be seen?
4. What kind of tasks can be carried out by other people than principals in the people's school?

The analysis is based on interviews with principals from different kinds of people's high schools. To get a picture of future principal tasks and the changing tendencies in the job, interviews have been carried out with high officials. By means of content analysis the interviews have been broken down and classified into different categories based on the content of the tasks.

A questionnaire has been constructed based on the data from the interviews. Every principal in the people's high school in the whole country has rated the tasks using: how often the task occurs, how difficult the task is to solve, how possible it is to delegate the task to other people within the school, and how important the task will be in the future. (Cf. Andersson & Klasson, 1974.)

Measures to encourage the practical use of the project results

Partly in order to make it easier to exploit the results of the project, one of the members of the project team has been functioning as secretary (part-time) in an organization group for the planning, execution and further development of training for school principals. The organization group forms part of the further education department in Linköping.

On the initiative of the project, direct cooperation has been established with one of the National Board of Education's program groups, which deals with the training of lecturers in methodology and tutors at the schools of education. In consultation with the program group, goals and content were

produced for the training of lecturers in methodology and tutors within the limits of the organization set up by the National Board of Education.

The project has also organized a new b dy of cooperation between research and application within the area of adult education, The Malmö Seminar on Adulf Education (cf. Gestrelius, 1974).

References

Alehammar, S. Några iakttagelser vid konstruktion och genomförande av försökskurs för skolledare. /Construction and implementation of an experimental course for school principals: Some observations./ Pedagogisk-psykologiska problem, No. 147, 1971.

Andersson, V. & Klasson, A. Folkhögskolerektorernas arbetsuppgifter: En jämförelse med studierektorer och rektorer i grundskolan. /The tasks of the principals in the people's high schools: A comparison with principals in the compulsory school./ Pedagogisk-psykologiska problem, No. 260, 1974.

Fredriksson, L. The use of self-observation and questionnaires in job analysis for the planning of training. (Studie psychol. et pædag., No. 22.) Lund: Gleerup, 1974.

Gestrelius, K. Vem känner våra utbildningsbehov? /Who knows our training needs?/ Reprint Series (Malmö, Sweden: School of Education), No. 147, 1973-74.

Gestrelius, K. Vuxenpedagogiska seminariet i Malmö. /The Malmö Seminar on Adult Education./ Reprint Series (Malmö, Sweden: School of Education), No. 170, 1974.

Gestrelius, K., Kristoffersson, A. & Lindqvist, K.-G. Tolv utbildningsavsnitt för lärarutbildare: Ett exempel på utbildningsplanering. /Twelve training units for teacher trainers: An example of planning for training./ Pedagogiska hjälpmedel, No. 14, 1974.

BEST COPY AVAILABLE